

## REMARKS

In accordance with the foregoing claim 9 has been added. No new matter is being presented, and approval and entry are respectfully requested. Claims 1-9 are pending and under consideration.

### REJECTION UNDER 35 U.S.C. § 102:

Claims 1-8 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Nomura et al (US 5,311,421 – hereinafter Nomura). Applicants traverse this rejection, and respectfully request reconsideration.

The Office Action on pages 3-4 cited column 34, line 55 to column 35, line 15 of Nomura as anticipating “generating a model of the controlled object by acquiring time series data of values which is outputted from a transfer function assumed in advance” (claim 1, lines 5-6). The cited portion of Nomura states that the

controller tuning system 16 develops the controller model function  $F'(Z)$  through learning, whereby a controller model is given to the controller 14. For the development of the controller model, time-series signals of the input variable (the desired value of the controlled variable) of the reference model are employed as learning input data

(column 34, lines 56-62). Thus, the controller model developed by Nomura is not “assumed in advance” as recited in claim 1, but rather is learned in a conventional manner for a neural network. Moreover, the learning technique used by Nomura to develop the controller model utilized an “inverse system model” in which “the output variable of the reference model are used as inputs to the inverse system model ... and the time-series signals of the input variable of the controlled system at that time are obtained as outputs from the inverse system model” (column 35, lines 20-25). In contrast, claim 1 recites “acquiring time series data of manipulated variables given to a controlled object and time series data of controlled variables outputted by the controlled object in response” at lines 4-5. Thus, the flow of information in Nomura is the reverse of what is recited in claim 1.

The Office Action cited the same portion of columns 34 and 35 in Nomura to reject independent claims 2-8. For the reasons discussed above, it is submitted that independent claims 1-8 are patentably distinguishable over Nomura and withdrawal of the rejections is respectfully requested.

Claim 9 recites “generating a controlled-object model, which receives time series manipulated variables and outputs time series controlled variables in response thereto, from a

transfer function determined prior to said generating" at lines 2-4. For the reasons discussed above, it is submitted that claim 9 is patentably distinguishable over Nomura.

**CONCLUSION:**

It is submitted that Nomura does not teach or suggest the features of the present claimed invention. Thus, claims 1-9 are in a condition suitable for allowance. Reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to such matters.

There being no further outstanding objections or rejections, it is submitted that the present application is in condition for allowance. An early action to that effect is courteously solicited.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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